

WEEKLY PROGRESS REPORT

NOVEMBER 7, 2005 – NOVEMBER 13, 2005

REMOVAL ACTION

NW NATURAL “GASCO” SITE

Prepared for Submittal to
U.S. Environmental Protection Agency, Region 10
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November 15, 2005

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1 INTRODUCTION

This weekly progress report is a requirement of the U.S. Environmental Protection Agency (EPA) approved Removal Action Project Plan (RAPP) and Section II.5 of the EPA Statement of Work (SOW) for the removal action at the "Gasco" site (Site). The RAPP was prepared to comply with requirements described in the EPA Administrative Order on Consent (Order) for the Site. Consistent with the schedule submitted to EPA (Appendix I of the RAPP), the construction contractor (Sevenson Environmental Services [SES]) initiated construction activities at the Site on August 22, 2005 following the pre-construction meeting. The remainder of this progress report documents the removal action activities that were conducted during the week of November 7 through November 13, 2005.

This is the final weekly progress report for the removal action. In-water construction at the Site was finalized on October 31, 2005 and at the transfer facility on November 11, 2005. Given no further in-water construction activities are anticipated, the completion date for the removal action is considered November 11, 2005. As required by the SOW, the Removal Action Completion Report will be submitted to EPA by January 17, 2006 (60 days following completion of the removal action).

2 CONSTRUCTION ACTIVITIES

The following section describes the construction activities conducted at the Site from November 7, 2005 through November 15, 2005.

2.1 Site Construction Activities

2.1.1 *Construction Activities*

The following activities were completed during the week:

- SES continued the removal of project related equipment and materials from the Site.

2.1.2 *Waste Transportation and Off-loading*

- Off-loading of haul barge and decontamination of haul barge #8 (B10) was completed on November 11. The haul barge B10 was then returned to its home port.
- The water tanks used during dewatering operations, the transfer bins, and the truck loading hopper were decontaminated.
- The transfer station infrastructure at the Port of Morrow was removed from the Site.
- Demobilization of the transfer facility was completed on November 11, 2005.

3 MONITORING ACTIVITIES

3.1 Cap Placement and Dredge Material Offload Monitoring

In accordance with Appendix D (i.e., Construction Water Sediment Monitoring Plan [WSMP]) of the RAPP, water quality monitoring for field parameters (turbidity, temperature, dissolved oxygen, pH, and visual monitoring for sheens) occurred during offloading and barge decontamination operations at the Transfer Facility in the Port of Morrow. Cap placement activities were completed on October 29, 2005 and final approval of the cap placement was given by EPA on November 1, 2005.

During offloading and barge decontamination operations at the Transfer Facility, field parameters were monitored every four hours at one upcurrent station 300 feet from the barge and three downcurrent stations 150 feet from the barge. At all locations, samples were collected at three depths—one foot below the surface, mid-depth, and one foot above the bottom.

The field parameter results are summarized for the Transfer Facility in Table 1 and compared to the triggers (from Table E-1 of the Removal Action Environmental Protection Plan [RAEPP]). No exceedances of the Table E-1 triggers were identified for any of the field parameters for this monitoring period.

3.2 Cap Monitoring – Laboratory Parameter Results

The requirement for this activity ended with the completion of cap placement on October 29, 2005.

3.3 Transfer Barge Dewater Monitoring – Laboratory Parameter Results

The requirement for this activity ended with the completion of dredging on October 19, 2005.

3.4 Dredge Monitoring – Silt Curtain-Mudline Interface

The requirement for this activity ended with the completion of the removal of the silt curtain, initiated on October 22, 2005.

3.5 Post-Dredge Surface Sediment Characterization

Surface sediment samples were collected as described in Appendix D of the RAPP immediately following the completion of sediment removal (as approved by EPA) and prior to cap placement on October 19, 2005. Samples were collected from 15 EPA-approved sampling stations within the pilot cap and fringing cover areas. The collected samples were submitted to the laboratory for analysis of physical and chemical parameters including TOC, TS, grain size, BTEX, PAHs (i.e., anthracene, benzo(a)anthracene, benzo(a)pyrene, dibenzofuran, fluoranthene, fluorene, naphthalene, and phenanthrene), TPH, cyanide, and total metals (i.e., arsenic, chromium, copper, nickel, lead, and zinc). These results will be used to determine the baseline conditions (i.e., Year 0) in the removal action area prior to cap placement and may be useful for later comparison to longer-term cap monitoring results. To monitor the quality of the decontamination and homogenization procedures, a rinsate blank and homogenization duplicate, respectively, were collected and will be analyzed for the identical list identified above.

Results from the surface sediment characterization are not available at this time but will be reported in the Removal Action Completion Report.

3.6 Post-Construction Sediment Trap Sampling

Post-construction sediment trap sampling was performed on November 8, 2005. Sample analysis is currently ongoing. The analytical results for both the pre- and post-construction sediment trap sampling will be summarized in the Removal Action Completion Report.

4 PROPOSED WORK FOR WEEK OF NOVEMBER 14, 2005

The following activities are proposed for the week beginning November 14, 2005:

- SES will remove the remaining office trailer and storage container from the Site on November 15, 2005.

TABLES

Table 1
Water Quality Field Parameters Monitoring Results Compared to Triggers—Transfer Facility
November 7 through November 13, 2005

Station ID	Date	Time	Latitude (dd) ¹	Longitude (dd)	Depth (ft)	DO (mg/L)	DO Triggers ²		Temp (deg C)	Temperature Triggers ²		Turbidity (NTU)	Turbidity Triggers ²		pH	pH Triggers ²	
							Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background
TF-WCU	11/7/2005	1249	45.85347	119.67043	1	9.72	NA	NA	12.55	NA	NA	1.64	NA	NA	7.83	NA	NA
TF-WCU	11/7/2005	1249	45.85347	119.67043	7	9.68	NA	NA	12.57	NA	NA	1.63	NA	NA	7.88	NA	NA
TF-WCU	11/7/2005	1249	45.85347	119.67043	13.5	9.70	NA	NA	12.57	NA	NA	1.69	NA	NA	7.93	NA	NA
TF-WCD1	11/7/2005	1220	45.85352	119.67284	1	9.68	<6.5	<6.5	12.56	12.85	21.78	2.20	4.64	6.33	7.76	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/7/2005	1220	45.85352	119.67284	13	9.67	<6.5	<6.5	12.57	12.87	21.48	1.63	4.63	6.58	7.89	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/7/2005	1220	45.85352	119.67284	25	9.61	<6.5	<6.5	12.58	12.87	21.42	1.71	4.69	6.64	7.94	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/7/2005	1232	45.85359	119.67266	1	9.63	<6.5	<6.5	12.55	12.85	21.78	1.36	4.64	6.33	7.84	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/7/2005	1232	45.85359	119.67266	12.5	9.62	<6.5	<6.5	12.56	12.87	21.48	1.57	4.63	6.58	7.91	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/7/2005	1232	45.85359	119.67266	24.5	9.57	<6.5	<6.5	12.57	12.87	21.42	1.23	4.69	6.64	7.94	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/7/2005	1240	45.85361	119.67239	1	9.66	<6.5	<6.5	12.55	12.85	21.78	1.19	4.64	6.33	7.84	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/7/2005	1240	45.85361	119.67239	13.5	9.58	<6.5	<6.5	12.56	12.87	21.48	1.29	4.63	6.58	7.94	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/7/2005	1240	45.85361	119.67239	26	9.62	<6.5	<6.5	12.56	12.87	21.42	1.75	4.69	6.64	7.95	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/7/2005	1650	45.85347	119.67043	1	9.71	NA	NA	12.59	NA	NA	1.44	NA	NA	7.80	NA	NA
TF-WCU	11/7/2005	1650	45.85347	119.67043	7	9.67	NA	NA	12.61	NA	NA	1.66	NA	NA	7.86	NA	NA
TF-WCU	11/7/2005	1650	45.85347	119.67043	13	9.65	NA	NA	12.61	NA	NA	2.08	NA	NA	7.86	NA	NA
TF-WCD1	11/7/2005	1630	45.85352	119.67284	1	9.68	<6.5	<6.5	12.66	12.89	21.78	1.99	4.44	6.33	7.88	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/7/2005	1630	45.85352	119.67284	13	9.74	<6.5	<6.5	12.60	12.91	21.48	1.84	4.66	6.58	8.01	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/7/2005	1630	45.85352	119.67284	25	9.72	<6.5	<6.5	12.58	12.91	21.42	1.92	5.08	6.64	8.00	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/7/2005	1636	45.85359	119.67266	1	9.61	<6.5	<6.5	12.61	12.89	21.78	1.90	4.44	6.33	7.90	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/7/2005	1636	45.85359	119.67266	12.5	9.66	<6.5	<6.5	12.59	12.91	21.48	1.87	4.66	6.58	7.95	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/7/2005	1636	45.85359	119.67266	24.5	9.72	<6.5	<6.5	12.57	12.91	21.42	1.70	5.08	6.64	7.98	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/7/2005	1642	45.85361	119.67239	1	9.67	<6.5	<6.5	12.63	12.89	21.78	1.94	4.44	6.33	7.87	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/7/2005	1642	45.85361	119.67239	13	9.60	<6.5	<6.5	12.62	12.91	21.48	2.39	4.66	6.58	7.95	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/7/2005	1642	45.85361	119.67239	25	9.70	<6.5	<6.5	12.56	12.91	21.42	NC	5.08	6.64	7.97	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/8/2005	838	45.85347	119.67043	1	9.03	NA	NA	12.18	NA	NA	2.74	NA	NA	7.83	NA	NA
TF-WCU	11/8/2005	838	45.85347	119.67043	7.5	9.02	NA	NA	12.19	NA	NA	1.39	NA	NA	7.88	NA	NA
TF-WCU	11/8/2005	838	45.85347	119.67043	14.5	9.03	NA	NA	12.17	NA	NA	1.55	NA	NA	7.92	NA	NA
TF-WCD1	11/8/2005	810	45.85352	119.67284	1	9.09	<6.5	<6.5	12.18	12.48	21.78	1.88	5.74	6.33	7.82	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/8/2005	810	45.85352	119.67284	10.5	9.04	<6.5	<6.5	12.13	12.49	21.48	1.58	4.39	6.58	7.93	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/8/2005	810	45.85352	119.67284	20	9.05	<6.5	<6.5	12.13	12.47	21.42	2.44	4.55	6.64	7.96	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/8/2005	809	45.85359	119.67266	1	9.04	<6.5	<6.5	12.23	12.48	21.78	2.47	5.74	6.33	7.83	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/8/2005	809	45.85359	119.67266	12.5	9.01	<6.5	<6.5	12.19	12.49	21.48	1.30	4.39	6.58	7.94	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/8/2005	809	45.85359	119.67266	24	9.03	<6.5	<6.5	12.10	12.47	21.42	1.52	4.55	6.64	7.97	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/8/2005	827	45.85361	119.67239	1	9.00	<6.5	<6.5	12.20	12.48	21.78	1.49	5.74	6.33	7.83	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/8/2005	827	45.85361	119.67239	13	9.01	<6.5	<6.5	12.12	12.49	21.48	1.18	4.39	6.58	7.93	<6.5 or >8.5	<6.5 or >8.5

Table 1
Water Quality Field Parameters Monitoring Results Compared to Triggers—Transfer Facility
November 7 through November 13, 2005

Station ID	Date	Time	Latitude (dd) ¹	Longitude (dd)	Depth (ft)	DO (mg/L)	DO Triggers ²		Temp (deg C)	Temperature Triggers ²		Turbidity (NTU)	Turbidity Triggers ²		pH	pH Triggers ²	
							Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background		Event Specific Background	Pre-construction Background
TF-WCD2	11/8/2005	1552	45.85359	119.67266	1	9.71	<6.5	<6.5	12.23	12.52	21.78	1.54	4.34	6.33	7.89	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/8/2005	1552	45.85359	119.67266	12.5	9.70	<6.5	<6.5	12.26	12.55	21.48	1.79	4.51	6.58	8.04	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/8/2005	1552	45.85359	119.67266	24	9.75	<6.5	<6.5	12.27	12.56	21.42	1.89	4.38	6.64	8.03	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/8/2005	1558	45.85361	119.67239	1	9.78	<6.5	<6.5	12.22	12.52	21.78	1.53	4.34	6.33	7.89	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/8/2005	1558	45.85361	119.67239	12	9.66	<6.5	<6.5	12.26	12.55	21.48	1.47	4.51	6.58	7.94	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/8/2005	1558	45.85361	119.67239	23.5	9.80	<6.5	<6.5	12.26	12.56	21.42	1.45	4.38	6.64	8.02	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/9/2005	1031	45.85347	119.67043	1	9.75	NA	NA	11.68	NA	NA	1.54	NA	NA	7.69	NA	NA
TF-WCU	11/9/2005	1031	45.85347	119.67043	7.5	9.72	NA	NA	11.68	NA	NA	1.65	NA	NA	7.83	NA	NA
TF-WCU	11/9/2005	1031	45.85347	119.67043	14	9.73	NA	NA	11.61	NA	NA	1.45	NA	NA	7.87	NA	NA
TF-WCD1	11/9/2005	1000	45.85352	119.67284	1	9.55	<6.5	<6.5	11.75	11.98	21.78	1.55	4.54	6.33	7.77	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/9/2005	1000	45.85352	119.67284	9	9.53	<6.5	<6.5	11.73	11.98	21.48	1.14	4.65	6.58	7.86	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/9/2005	1000	45.85352	119.67284	17	9.66	<6.5	<6.5	11.62	11.91	21.42	1.30	4.45	6.64	7.87	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/9/2005	1012	45.85359	119.67266	1	9.60	<6.5	<6.5	11.77	11.98	21.78	1.66	4.54	6.33	7.70	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/9/2005	1012	45.85359	119.67266	12	9.63	<6.5	<6.5	11.68	11.98	21.48	1.54	4.65	6.58	7.85	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/9/2005	1012	45.85359	119.67266	23.5	9.68	<6.5	<6.5	11.61	11.91	21.42	1.46	4.45	6.64	7.86	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/9/2005	1020	45.85361	119.67239	1	9.74	<6.5	<6.5	11.73	11.98	21.78	1.52	4.54	6.33	7.69	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/9/2005	1020	45.85361	119.67239	12.5	9.72	<6.5	<6.5	11.75	11.98	21.48	1.47	4.65	6.58	7.83	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/9/2005	1020	45.85361	119.67239	24	9.79	<6.5	<6.5	11.63	11.91	21.42	1.73	4.45	6.64	7.86	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/9/2005	1421	45.85347	119.67043	1	9.85	NA	NA	11.69	NA	NA	1.43	NA	NA	7.71	NA	NA
TF-WCU	11/9/2005	1421	45.85347	119.67043	7	9.81	NA	NA	11.69	NA	NA	1.25	NA	NA	7.83	NA	NA
TF-WCU	11/9/2005	1421	45.85347	119.67043	13.5	9.91	NA	NA	11.59	NA	NA	1.35	NA	NA	7.90	NA	NA
TF-WCD1	11/9/2005	1350	45.85352	119.67284	1	9.85	<6.5	<6.5	11.85	11.99	21.78	1.34	4.43	6.33	7.74	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/9/2005	1350	45.85352	119.67284	10	9.74	<6.5	<6.5	11.84	11.99	21.48	1.06	4.25	6.58	7.87	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/9/2005	1350	45.85352	119.67284	19	9.81	<6.5	<6.5	11.84	11.89	21.42	1.32	4.35	6.64	7.89	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/9/2005	1358	45.85359	119.67266	1	9.85	<6.5	<6.5	11.81	11.99	21.78	1.47	4.43	6.33	7.73	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/9/2005	1358	45.85359	119.67266	12.5	9.83	<6.5	<6.5	11.81	11.99	21.48	1.45	4.25	6.58	7.87	<6.5 or >8.5	<6.5 or >8.5
TF-WCD2	11/9/2005	1358	45.85359	119.67266	24.5	9.81	<6.5	<6.5	11.75	11.89	21.42	1.02	4.35	6.64	7.88	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/9/2005	1409	45.85361	119.67239	1	9.87	<6.5	<6.5	11.78	11.99	21.78	1.38	4.43	6.33	7.71	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/9/2005	1409	45.85361	119.67239	13	9.85	<6.5	<6.5	11.79	11.99	21.48	1.39	4.25	6.58	7.87	<6.5 or >8.5	<6.5 or >8.5
TF-WCD3	11/9/2005	1409	45.85361	119.67239	25	9.89	<6.5	<6.5	11.70	11.89	21.42	1.49	4.35	6.64	7.86	<6.5 or >8.5	<6.5 or >8.5
TF-WCU	11/9/2005	1652	45.85347	119.67043	1	9.81	NA	NA	11.67	NA	NA	1.50	NA	NA	7.73	NA	NA
TF-WCU	11/9/2005	1652	45.85347	119.67043	7	9.94	NA	NA	11.71	NA	NA	1.74	NA	NA	7.82	NA	NA
TF-WCU	11/9/2005	1652	45.85347	119.67043	13.5	9.86	NA	NA	11.73	NA	NA	1.40	NA	NA	7.82	NA	NA
TF-WCD1	11/9/2005	1630	45.85352	119.67284	1	9.82	<6.5	<6.5	11.69	11.97	21.78	1.57	4.50	6.33	7.73	<6.5 or >8.5	<6.5 or >8.5
TF-WCD1	11/9/2005	1630	45.85352	119.67284	11	9.67	<6.5	<6.5	11.74	12.01	21.48	1.34	4.74	6.58	7.86	<6.5 or >8.5	<6.5 or

Table 1
Water Quality Field Parameters Monitoring Results Compared to Triggers—Transfer Facility
November 7 through November 13, 2005

Station ID	Date	Time	Latitude (dd) ¹	Longitude (dd)	Depth (ft)	DO (mg/L)	DO Triggers ²		Temp (deg C)	Temperature Triggers ²		Turbidity (NTU)	Turbidity Triggers ²		pH	pH Triggers ²				
							Pre-construction			Event Specific			Pre-construction			Event Specific				
							Background	Background		Background	Background		Background	Background		Background	Background			
TF-WCU	11/10/2005	1445	45.85347	119.67043	1	9.19	NA	NA	11.58	NA	NA	1.26	NA	NA	7.93	NA	NA			
TF-WCU	11/10/2005	1445	45.85347	119.67043	6.5	9.26	NA	NA	11.56	NA	NA	1.48	NA	NA	8.01	NA	NA			
TF-WCU	11/10/2005	1445	45.85347	119.67043	13	9.41	NA	NA	11.53	NA	NA	1.52	NA	NA	8.05	NA	NA			
TF-WCD1	11/10/2005	1435	45.85352	119.67284	1	9.62	<6.5	<6.5	11.53	11.88	21.78	1.24	4.26	6.33	7.90	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD1	11/10/2005	1435	45.85352	119.67284	10	9.20	<6.5	<6.5	11.51	11.86	21.48	1.34	4.48	6.58	8.06	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD1	11/10/2005	1435	45.85352	119.67284	20	9.28	<6.5	<6.5	11.51	11.83	21.42	0.98	4.52	6.64	8.08	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD2	11/10/2005	1415	45.85359	119.67266	1	9.21	<6.5	<6.5	11.54	11.88	21.78	1.36	4.26	6.33	7.92	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD2	11/10/2005	1415	45.85359	119.67266	13.5	9.23	<6.5	<6.5	11.50	11.86	21.48	1.34	4.48	6.58	8.07	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD2	11/10/2005	1415	45.85359	119.67266	27	9.16	<6.5	<6.5	11.48	11.83	21.42	0.91	4.52	6.64	8.09	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD3	11/10/2005	1420	45.85361	119.67239	1	9.26	<6.5	<6.5	11.58	11.88	21.78	1.87	4.26	6.33	7.93	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD3	11/10/2005	1420	45.85361	119.67239	13	9.37	<6.5	<6.5	11.50	11.86	21.48	1.33	4.48	6.58	8.07	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD3	11/10/2005	1420	45.85361	119.67239	26	9.16	<6.5	<6.5	11.47	11.83	21.42	1.30	4.52	6.64	8.06	<6.5 or >8.5	<6.5 or >8.5			
TF-WCU	11/11/2005	939	45.85347	119.67043	1	9.25	NA	NA	11.57	NA	NA	1.43	NA	NA	7.92	NA	NA			
TF-WCU	11/11/2005	939	45.85347	119.67043	7	9.28	NA	NA	11.53	NA	NA	1.27	NA	NA	7.99	NA	NA			
TF-WCU	11/11/2005	939	45.85347	119.67043	14	9.33	NA	NA	11.51	NA	NA	1.36	NA	NA	8.02	NA	NA			
TF-WCD1	11/11/2005	900	45.85352	119.67284	1	9.53	<6.5	<6.5	11.55	11.87	21.78	1.48	4.43	6.33	7.94	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD1	11/11/2005	900	45.85352	119.67284	11	9.31	<6.5	<6.5	11.54	11.83	21.48	1.39	4.27	6.58	7.98	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD1	11/11/2005	900	45.85352	119.67284	20.5	9.27	<6.5	<6.5	11.51	11.81	21.42	1.21	4.36	6.64	8.02	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD2	11/11/2005	912	45.85359	119.67266	1	9.43	<6.5	<6.5	11.51	11.87	21.78	1.59	4.43	6.33	7.96	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD2	11/11/2005	912	45.85359	119.67266	13	9.35	<6.5	<6.5	11.50	11.83	21.48	1.33	4.27	6.58	8.01	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD2	11/11/2005	912	45.85359	119.67266	26	9.25	<6.5	<6.5	11.50	11.81	21.42	1.09	4.36	6.64	8.06	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD3	11/11/2005	925	45.85361	119.67239	1	9.12	<6.5	<6.5	11.57	11.87	21.78	1.44	4.43	6.33	7.95	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD3	11/11/2005	925	45.85361	119.67239	13.5	9.23	<6.5	<6.5	11.55	11.83	21.48	1.40	4.27	6.58	7.98	<6.5 or >8.5	<6.5 or >8.5			
TF-WCD3	11/11/2005	925	45.85361	119.67239	27	9.37	<6.5	<6.5	11.53	11.81	21.42	1.51	4.36	6.64	8.04	<6.5 or >8.5	<6.5 or >8.5			

Notes: ¹Datum for coordinates is NAD 83.

²Trigger is exceeded where downstream conditions exceed the specified amounts relative to both the event-specific background and the pre-construction background survey (95% upper confidence limit on the mean for temperature and

³TF-WCU is the upstream event-specific background station.

BOLD indicates an exceedance

NC indicates that a parameter was not collected

APPENDIX A

TRANSFER FACILITY WQ MONITORING LOG SHEETS



1423 3rd Ave., Suite 300
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Water Quality Monitoring Form

Station ID: TF-WCD-1 Date: 11-7-05 Time: 1220

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, Overcast/occasional showers, wind N 5 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. First round of trucks completed (3 trucks)

Depth to Bottom: 26 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.68</u>	<u>12.56</u>	<u>2.20</u>
Depth 2: <u>13 (ft.)</u>	<u>9.67</u>	<u>12.57</u>	<u>1.63</u>
Depth 3: <u>25 (ft.)</u>	<u>9.61</u>	<u>12.58</u>	<u>1.71</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:	
Odor:	
Other Observations:	

Comments:

pH: 1 7.76 2 7.89 3 7.94

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harguail



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Water Quality Monitoring Form

Station ID: TF-WCD-2 Date: 11-7-07 Time: 1232

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, Overcast/occasional showers, wind ~5 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. First round of truck (3) completed

Depth to Bottom: 25.5 (ft)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.63</u>	<u>12.55</u>	<u>1.36</u>
Depth 2: <u>12.5 (ft)</u>	<u>9.62</u>	<u>12.56</u>	<u>1.57</u>
Depth 3: <u>24.5 (ft)</u>	<u>9.57</u>	<u>12.57</u>	<u>1.23</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.84 2 7.91 3 7.94

Recorded by: Craig Wells Other Monitoring Personnel: Steve Hargrave



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-7-05 Time: 1240

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, overcast/occasional showers, wind ~5 mph from WEST

Status/Description of Operation at Time of Sampling:

(3) offloading barge B-10, First round of trucks completed

Depth to Bottom: 27 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.66</u>	<u>12.55</u>	<u>1.19</u>
Depth 2: <u>13.5 (m)ft.</u>	<u>9.58</u>	<u>12.56</u>	<u>1.29</u>
Depth 3: <u>26 (m)ft.</u>	<u>9.62</u>	<u>12.56</u>	<u>1.75</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.84 2 7.94 3 7.95

Recorded by: Craig Wells Other Monitoring Personnel: Steve Harguar



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Water Quality Monitoring Form

Station ID: <u>TF-WCU</u>	Date: <u>11-7-05</u>	Time: <u>1249</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>47°, Overcast/occasional showers, wind n 5 mph from west</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. First round of trucks (3) completed</u>			
Depth to Bottom: <u>14.5 (ft.)</u>	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.72</u>	<u>12.55</u>	<u>1.64</u>
Depth 2: <u>7 (ft.)</u>	<u>9.68</u>	<u>12.57</u>	<u>1.63</u>
Depth 3: <u>13.5 (ft.)</u>	<u>9.70</u>	<u>12.57</u>	<u>1.69</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.83</u> 2 <u>7.88</u> 3 <u>7.93</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-1 Date: 11-7-05 Time: 1630

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, overcast, wind 5-8 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Waiting for trucks

Depth to Bottom: 26 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.68</u>	<u>12.66</u>	<u>1.99</u>
Depth 2: <u>13 (ft.)</u>	<u>9.74</u>	<u>12.60</u>	<u>1.84</u>
Depth 3: <u>25 (ft.)</u>	<u>9.72</u>	<u>12.58</u>	<u>1.92</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.88 2 8.01 3 8.00

Recorded by:

Craig Wells

Other Monitoring Personnel:

Steve Harguinol



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Water Quality Monitoring Form

Station ID: TF-WCD-2 Date: 11-7-05 Time: 16 36

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, overcast, wind 5-8 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Waiting for tracks

Depth to Bottom: 25.5 (ft)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.61</u>	<u>12.61</u>	<u>1.90</u>
Depth 2: <u>12.5 (ft)</u>	<u>9.66</u>	<u>12.59</u>	<u>1.87</u>
Depth 3: <u>24.5 (ft)</u>	<u>9.72</u>	<u>12.57</u>	<u>1.70</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:	
Odor:	
Other Observations:	

Comments:

pH: 1 7.90 2 7.95 3 7.98

Recorded by:

Craig Wells

Other Monitoring Personnel: Steve Harganai



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-7-05 Time: 1642

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, overcast, wind 5-8 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10 - Waiting for trucks

Depth to Bottom: 26 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.67</u>	<u>12.63</u>	<u>1.94</u>
Depth 2: <u>13 (m)ft.</u>	<u>9.60</u>	<u>12.62</u>	<u>2.39</u>
Depth 3: <u>25 (m)ft.</u>	<u>9.70</u>	<u>12.56</u>	
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.87 2 7.95 3 7.97

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquail.



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Water Quality Monitoring Form

Station ID: TF-WCU Date: 11-7-05 Time: 1650

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, Overcast, wind 5-8 mph from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, Waiting for trucks

Depth to Bottom: 14 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.71</u>	<u>12.59</u>	<u>1.44</u>
Depth 2: <u>7 (ft.)</u>	<u>9.67</u>	<u>12.61</u>	<u>1.66</u>
Depth 3: <u>13 (ft.)</u>	<u>9.65</u>	<u>12.61</u>	<u>2.08</u>
Other:			

Evidence of floating or suspended materials:

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

None

Discoloration and Turbidity:

None

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.80 2 7.86 3 7.86

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Haugland



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11-8-05</u>	Time: <u>0810</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>36°, Clear, Wind < 5 mph from west</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. First round of trucks completed</u>			
Depth to Bottom: <u>21</u> (<u>ft.</u>)			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (<u>ft.</u>)	<u>9.09</u>	<u>12.18</u>	<u>1.88</u>
Depth 2: <u>10.5</u> (<u>ft.</u>)	<u>9.04</u>	<u>12.13</u>	<u>1.58</u>
Depth 3: <u>20</u> (<u>ft.</u>)	<u>9.05</u>	<u>12.13</u>	<u>2.44</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:	<p>pH: 1 <u>7.82</u> 2 <u>7.93</u> 3 <u>7.96</u></p> <p>DO values appear questionable. DO was recalibrated prior to third monitoring event (approx 3:00 pm)</p>		
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harquail</u>		



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-2</u>	Date: <u>11-8-05</u>	Time: <u>0809</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>36°, clear, wind <5 mph from west</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. First round of trucks completed.</u>			
Depth to Bottom: <u>25 (m)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.04</u>	<u>12.23</u>	<u>2.47</u>
Depth 2: <u>12.5 (m)ft.</u>	<u>9.01</u>	<u>12.19</u>	<u>1.30</u>
Depth 3: <u>24 (m)ft.</u>	<u>9.03</u>	<u>12.10</u>	<u>1.52</u>
Other:			
Evidence of floating or suspended materials:	<u>None</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>None</u>		
Discoloration and Turbidity:	<u>None</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.83</u> 2 <u>7.94</u> 3 <u>7.97</u>			
DO values appeared questionable. DO was recalibrated prior to third monitoring event (approx. 3:00 pm)			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-3</u>	Date: <u>11-8-05</u>	Time: <u>0827</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>36°, clear, wind <5 mph from west</u>			
Status/Description of Operation at Time of Sampling: <u>offloading barge B-10. First round of trucks completed</u>			
Depth to Bottom: <u>26 (ft) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft) ft.</u>	<u>9.00</u>	<u>12.20</u>	<u>1.49</u>
Depth 2: <u>13 (ft) ft.</u>	<u>9.01</u>	<u>12.12</u>	<u>1.18</u>
Depth 3: <u>25 (ft) ft.</u>	<u>9.01</u>	<u>12.10</u>	<u>1.42</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.83</u> 2 <u>7.93</u> 3 <u>7.92</u>			
DO values appeared questionable. DO was recalibrated prior to third monitoring event (approx. 3:00 pm)			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCU Date: 11-8-05 Time: 0838

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing:		Long/Easting:	
---------------	--	---------------	--

Weather/River Stage/Flow Observations:

36°, clear, wind <5 from west

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. First round of trucks completed.

Depth to Bottom: 15.5 (ft)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.03</u>	<u>12.18</u>	<u>2.74</u>
Depth 2: <u>7.5 (ft)</u>	<u>9.02</u>	<u>12.19</u>	<u>1.39</u>
Depth 3: <u>14.5 (ft)</u>	<u>9.03</u>	<u>12.17</u>	<u>1.55</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.83 2 7.88 3 7.92

DO values appeared questionable. DO was recalibrated prior to third monitoring event (approx 3:00 pm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harguin



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Water Quality Monitoring Form

Station ID: TF-WCD-1 Date: 11-8-05 Time: 1134

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

48°, partly cloudy, wind < 5 mph from south

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Second round of trucks completed

Depth to Bottom: 22 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.03</u>	<u>12.22</u>	<u>1.53</u>
Depth 2: <u>11 (ft.)</u>	<u>9.01</u>	<u>12.22</u>	<u>1.04</u>
Depth 3: <u>21 (ft.)</u>	<u>9.00</u>	<u>12.23</u>	<u>1.25</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.88 2 8.03 3 8.06

DO values appeared questionable. DO was recalibrated prior to third monitoring event (approx. 3:00 pm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Haquail



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Water Quality Monitoring Form

Station ID: TF-WCD-2 Date: 11-8-05 Time: 1141

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

48°, partly cloudy, wind < 5 mph from south

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Second round of trucks completed

Depth to Bottom: 25 (m)ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m)ft.</u>	<u>9.03</u>	<u>12.26</u>	<u>1.17</u>
Depth 2: <u>12.5 (m)ft.</u>	<u>8.99</u>	<u>12.22</u>	<u>1.48</u>
Depth 3: <u>24 (m)ft.</u>	<u>9.01</u>	<u>12.21</u>	<u>1.15</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.89 2 8.05 3 8.06

DO values appeared questionable, DO was recalibrated prior to third monitoring event. (approx. 3100 µm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Haquail



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-8-05 Time: 1148

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

48°, partly cloudy, wind < 5 mph from south

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, second round of trucks completed

Depth to Bottom: 26.5 (ft) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.02</u>	<u>12.25</u>	<u>1.23</u>
Depth 2: <u>13 (ft)</u>	<u>8.98</u>	<u>12.22</u>	<u>1.44</u>
Depth 3: <u>25.5 (ft)</u>	<u>8.99</u>	<u>12.20</u>	<u>1.44</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.88 2 8.04 3 8.06

DO values appeared questionable. DO was recalibrated prior to third monitoring event (approx. 3:00 pm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harguinid



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Water Quality Monitoring Form

Station ID: TF-WC U

Date: 11-8-05

Time: 1200

Project Name: Gasco

Project Number: 000029-02

Coordinates Datum:

Lat/Northing:

Long/Easting:

Weather/River Stage/Flow Observations:

48°, partly cloudy, wind <5 mph from south

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Second round of trucks completed

Depth to Bottom: 13 (•) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (•) ft.</u>	<u>8.84</u>	<u>12.11</u>	<u>1.40</u>
Depth 2: <u>6.5 (•) ft.</u>	<u>8.93</u>	<u>12.15</u>	<u>1.43</u>
Depth 3: <u>12 (•) ft.</u>	<u>9.09</u>	<u>12.13</u>	<u>1.55</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.89 2 7.86 3 8.05

DO values appeared questionable. DO was recalibrated prior to third monitoring event (approx. 3:00 pm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Hargan)



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11-8-05</u>	Time: <u>1544</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>52°, clear, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Third round of trucks completed</u>			
Depth to Bottom: <u>21 (ft.)</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.75</u>	<u>12.23</u>	<u>1.52</u>
Depth 2: <u>10.5 (ft.)</u>	<u>9.85</u>	<u>12.26</u>	<u>1.85</u>
Depth 3: <u>20 (ft.)</u>	<u>9.66</u>	<u>12.27</u>	<u>2.00</u>
Other:			
Evidence of floating or suspended materials:		<u>none</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
<u>pH: 1 7.91 2 8.02 3 8.08</u>			
<u>DO recalibrated prior to this monitoring event. (at approx. 3:00 pm)</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harquail</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-2 Date: 11-8-05 Time: 1552

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

52°, clear, calm

Status/Description of Operation at Time of Sampling:

Offloading barge B-10, Third round of trucks completed

Depth to Bottom: 25 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.71</u>	<u>12.23</u>	<u>1.54</u>
Depth 2: <u>12.5 (ft.)</u>	<u>9.70</u>	<u>12.26</u>	<u>1.79</u>
Depth 3: <u>24 (ft.)</u>	<u>9.75</u>	<u>12.27</u>	<u>1.89</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.89 2 8.04 3 8.03

DO recalibrated prior to this monitoring event
(at approx. 3:00 pm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harganil



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-3</u>	Date: <u>11-8-05</u>	Time: <u>1558</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>52°, clear, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Offloading barge B-10. Third round of trucks completed</u>			
Depth to Bottom: <u>24.5 (ft.)</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.78</u>	<u>12.22</u>	<u>1.53</u>
Depth 2: <u>12 (ft.)</u>	<u>9.66</u>	<u>12.26</u>	<u>1.47</u>
Depth 3: <u>23.5 (ft.)</u>	<u>9.80</u>	<u>12.26</u>	<u>1.45</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:	<p>pH: 1 <u>7.89</u> 2 <u>7.94</u> 3 <u>8.02</u></p> <p>DO recalibrated prior to this monitoring event (at approx. 3:00 pm)</p>		
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harquail</u>		



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Water Quality Monitoring Form

Station ID: TF-WCU Date: 11-8-05 Time: 1608

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

52°, clear, calm

Status/Description of Operation at Time of Sampling:

Offloading barge B-10. Third round of trucks completed

Depth to Bottom: 16 (~~ft.~~) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (ft.) ft.	<u>9.93</u>	<u>12.22</u>	<u>1.34</u>
Depth 2: <u>8</u> (ft.) ft.	<u>9.96</u>	<u>12.25</u>	<u>1.51</u>
Depth 3: <u>15</u> (ft.) ft.	<u>9.94</u>	<u>12.26</u>	<u>1.38</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:	
Odor:	
Other Observations:	

Comments:

pH: 1 7.93 2 8.04 3 8.07

DO recalibrated prior to this monitoring event.
(at approx x, 3:00 pm)

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harganai



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-1</u>	Date: <u>11-9-05</u>	Time: <u>1000</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>33°, Foggy, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Decommissioning barge B-10</u>			
Depth to Bottom: <u>18 (ft) ft.</u>	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft) ft.</u>	<u>9.55</u>	<u>11.75</u>	<u>1.55</u>
Depth 2: <u>9 (ft) ft.</u>	<u>9.53</u>	<u>11.73</u>	<u>1.14</u>
Depth 3: <u>17 (ft) ft.</u>	<u>9.66</u>	<u>11.62</u>	<u>1.30</u>
Other:			
Evidence of floating or suspended materials:		<u>none</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments: pH: 1 <u>7.77</u> 2 <u>7.86</u> 3 <u>7.87</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-2 Date: 11-9-05 Time: 1012

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

33°, Foggy, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 24.5 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.60</u>	<u>11.77</u>	<u>1.66</u>
Depth 2: <u>12 (ft.)</u>	<u>9.63</u>	<u>11.68</u>	<u>1.84</u>
Depth 3: <u>23.5 (ft.)</u>	<u>9.68</u>	<u>11.61</u>	<u>1.46</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.70 2 7.85 3 7.86

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquail



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-9-05 Time: 1020

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

33°, Foggy, Calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 25 (±) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (±) ft.</u>	<u>9.74</u>	<u>11.73</u>	<u>1.52</u>
Depth 2: <u>12.5 (±) ft.</u>	<u>9.72</u>	<u>11.75</u>	<u>1.47</u>
Depth 3: <u>24 (±) ft.</u>	<u>9.79</u>	<u>11.63</u>	<u>1.73</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.69 2 7.83 3 7.86

Recorded by: Craig Wells Other Monitoring Personnel: Steve Harquist



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Water Quality Monitoring Form

Station ID: TF-WCU

Date: 11-05-05 Time: 1031

Project Name: Gasco

Project Number: 000029-02

Coordinates Datum:

Lat/Northing:

Long/Easting:

Weather/River Stage/Flow Observations:

33°, Foggy, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 15 (ft) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft) ft.</u>	<u>9.75</u>	<u>11.68</u>	<u>1.54</u>
Depth 2: <u>7.5 (ft) ft.</u>	<u>9.72</u>	<u>11.68</u>	<u>1.65</u>
Depth 3: <u>14 (ft) ft.</u>	<u>9.73</u>	<u>11.61</u>	<u>1.45</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:	
Odor:	
Other Observations:	

Comments:

pH: 1 7.69 2 7.83 3 7.87

Recorded by: Craig Wells

Other Monitoring Personnel:

Steve Haiguel



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Water Quality Monitoring Form

Station ID: TF-WCD-1 Date: 11-9-05 Time: 1350

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

41°, sunny, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 20 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (<u>ft.</u>)	<u>9.85</u>	<u>11.85</u>	<u>1.34</u>
Depth 2: <u>10</u> (<u>ft.</u>)	<u>9.74</u>	<u>11.84</u>	<u>1.06</u>
Depth 3: <u>19</u> (<u>ft.</u>)	<u>9.81</u>	<u>11.84</u>	<u>1.32</u>
Other:			

Evidence of floating or suspended materials:

aquatic vegetation

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.74 2 7.87 3 7.89

Recorded by: Craig Wells Other Monitoring Personnel: Steve Hargrave



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-9-05</u>	Time: <u>1358</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>41°, sunny, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Decommissioning barge B-10</u>			
Depth to Bottom: <u>25.5 (±) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (±) ft.</u>	<u>9.85</u>	<u>11.81</u>	<u>1.47</u>
Depth 2: <u>12.5 (±) ft.</u>	<u>9.83</u>	<u>11.81</u>	<u>1.45</u>
Depth 3: <u>24.5 (±) ft.</u>	<u>9.81</u>	<u>11.75</u>	<u>1.02</u>
Other:			
Evidence of floating or suspended materials:		<u>aquatic vegetation</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.73</u>	2 <u>7.87</u>	3 <u>7.88</u>	
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-9-05 Time: 1409

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

41°, sunny, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 26 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (<u>ft.</u>)	<u>9.87</u>	<u>11.78</u>	<u>1.38</u>
Depth 2: <u>13</u> (<u>ft.</u>)	<u>9.85</u>	<u>11.79</u>	<u>1.39</u>
Depth 3: <u>25</u> (<u>ft.</u>)	<u>9.89</u>	<u>11.70</u>	<u>1.49</u>
Other:			

Evidence of floating or suspended materials:

aquatic vegetation

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.71 2 7.87 3 7.86

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Hargrave



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Water Quality Monitoring Form

Station ID: TF-WCU

Date: 11-9-05 Time: 1421

Project Name: Gasco

Project Number: 000029-02

Coordinates Datum:

Lat/Northing:

Long/Easting:

Weather/River Stage/Flow Observations:

41°, sunny, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10 & dismanteling transfer area

Depth to Bottom: 14.5 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>9.85</u>	<u>11.69</u>	<u>1.43</u>
Depth 2: <u>7 (ft.)</u>	<u>9.81</u>	<u>11.69</u>	<u>1.25</u>
Depth 3: <u>13.5 (ft.)</u>	<u>9.91</u>	<u>11.59</u>	<u>1.35</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.71 2 7.83 3 7.90

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Hargrave



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11-9-05</u>	Time: <u>1630</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>47°, clear, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Decommissioning barge B-10. Dismantling transfer area.</u>			
Depth to Bottom: <u>21.5 (±) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (±) ft.</u>	11.69 <u>9.82</u>	11.69 <u>11.69</u>	<u>1.57</u>
Depth 2: <u>11 (±) ft.</u>	11.67 <u>9.67</u>	11.74 <u>11.74</u>	<u>1.34</u>
Depth 3: <u>20.5 (±) ft.</u>	<u>9.68</u>	<u>11.73</u>	<u>1.42</u>
Other:			
Evidence of floating or suspended materials:	<u>aquatic vegetation</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.73</u> 2 <u>7.86</u> 3 <u>7.88</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Harquail</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-9-05</u>	Time: <u>1637</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>47°, clear, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Decommissioning barge B-10, Dismantling Transfer area</u>			
Depth to Bottom: <u>24.5 (ft)</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.74</u>	<u>11.71</u>	<u>1.38</u>
Depth 2: <u>12 (ft)</u>	<u>9.78</u>	<u>11.73</u>	<u>1.45</u>
Depth 3: <u>23.5 (ft)</u>	<u>9.79</u>	<u>11.74</u>	<u>1.51</u>
Other:			
Evidence of floating or suspended materials:		<u>none</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>none</u>	
Discoloration and Turbidity:		<u>none</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments: pH: 1 <u>7.72</u> 2 <u>7.87</u> 3 <u>—</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-9-05 Time: 1645

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, clear, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10. Dismantling transfer area

Depth to Bottom: 26 (ft)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.60</u>	<u>11.71</u>	<u>1.52</u>
Depth 2: <u>13 (ft)</u>	<u>9.73</u>	<u>11.74</u>	<u>1.44</u>
Depth 3: <u>25 (ft)</u>	<u>9.75</u>	<u>11.74</u>	<u>1.38</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.71 2 7.86 3 7.86

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquail



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Water Quality Monitoring Form

Station ID: TF-WCU Date: 11-9-05 Time: 1652

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

47°, clear, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10. Dismantling transfer area.

Depth to Bottom: 14.5 (±) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (±) ft.</u>	<u>9.81</u>	<u>11.67</u>	<u>1.50</u>
Depth 2: <u>7 (±) ft.</u>	<u>9.94</u>	<u>11.71</u>	<u>1.79</u>
Depth 3: <u>13.5 (±) ft.</u>	<u>9.86</u>	<u>11.73</u>	<u>1.40</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.73 2 7.82 3 7.82

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquail



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-1</u>	Date: <u>11-10-05</u>	Time: <u>0809</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>34°, clear & Foggy, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Deconnning barge B-10</u>			
Depth to Bottom: <u>22 (m) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (m) ft.</u>	<u>9.16</u>	<u>11.19</u>	<u>1.48</u>
Depth 2: <u>11 (m) ft.</u>	<u>9.13</u>	<u>11.18</u>	<u>1.68</u>
Depth 3: <u>21 (m) ft.</u>	<u>9.19</u>	<u>11.22</u>	<u>1.29</u>
Other:			
Evidence of floating or suspended materials:		<u>None</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>None</u>	
Discoloration and Turbidity:		<u>None</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments: pH: 1 <u>7.83</u> 2 <u>7.98</u> 3 <u>8.00</u>			
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Steve Hargrave</u>		



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Water Quality Monitoring Form			
Station ID: <u>TF-WCD-2</u>	Date: <u>11-10-05</u>	Time: <u>0814</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>34°, clear & foggy, calm</u>			
Status/Description of Operation at Time of Sampling: <u>Decommissioning barge B-10</u>			
Depth to Bottom: <u>24 (ft)</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.09</u>	<u>11.27</u>	<u>1.56</u>
Depth 2: <u>12 (ft)</u>	<u>9.20</u>	<u>11.31</u>	<u>0.94</u>
Depth 3: <u>23 (ft)</u>	<u>9.16</u>	<u>11.22</u>	<u>1.22</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.84</u>	2 <u>7.97</u>	3 <u>7.98</u>	8.01
Recorded by: <u>Craig Wells</u>	Other Monitoring Personnel: <u>Stere Harguail</u>		



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11-10-05 Time: 0821

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

34°, clear & foggy, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 25 (ft) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft)</u>	<u>9.06</u>	<u>11.37</u>	<u>1.46</u>
Depth 2: <u>12.5 (ft)</u>	<u>9.05</u>	<u>11.35</u>	<u>1.48</u>
Depth 3: <u>24 (ft)</u>	<u>9.13</u>	<u>11.19</u>	<u>1.24</u>
Other:			

Evidence of floating or suspended materials:

None

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

None

Discoloration and Turbidity:

None

Velocity at stated depth:

Color:			
Odor:			
Other Observations:			

Comments:

pH: 1 7.83 2 7.98 3 7.99

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Haquail



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Water Quality Monitoring Form

Station ID: TF-WCU Date: 11-10-05 Time: 0829

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

34°, clear and Foggy, calm

Status/Description of Operation at Time of Sampling:

Decommissioning barge B-10

Depth to Bottom: 13.5 (ft.)

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (ft.)</u>	<u>8.97</u>	<u>11.28</u>	<u>1.72</u>
Depth 2: <u>7 (ft.)</u>	<u>8.96</u>	<u>11.26</u>	<u>1.35</u>
Depth 3: <u>12.5 (ft.)</u>	<u>9.07</u>	<u>10.95</u>	<u>1.50</u>
Other:			

Evidence of floating or suspended materials:

none

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

none

Discoloration and Turbidity:

none

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.82 2 7.95 3 8.00

Recorded by: Craig Wells

Other Monitoring Personnel: Steve Harquail



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Water Quality Monitoring Form

Station ID: <u>TF-WC U</u>	Date: <u>11/10/05</u>	Time: <u>14:45</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>Sunny 50°, Calm</u>			
Status/Description of Operation at Time of Sampling: <u>cleaning/scraping B-10</u>			
Depth to Bottom: <u>(#) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (#) ft.	<u>9.19</u>	<u>11.58</u>	<u>1.26</u>
Depth 2: <u>6.5</u> (#) ft.	<u>9.26</u>	<u>11.56</u>	<u>1.26</u> <u>1.48</u>
Depth 3: <u>13</u> (#) ft.	<u>9.41</u>	<u>11.53</u>	<u>1.52</u>
Other:			
Evidence of floating or suspended materials:			
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)			
Discoloration and Turbidity:			
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.93</u>	2 <u>8.01</u>	3 <u>8.05</u>	
<u>Steph Haynes</u>		<u>Andrew Sames</u>	
Recorded by: <u>Crangewells</u>	Other Monitoring Personnel:		



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Water Quality Monitoring Form

Station ID: TF-WC D-1 Date: 11/10/05 Time: 1435

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations:

Status/Description of Operation at Time of Sampling: scrapping - R10

Depth to Bottom: (#) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (#) ft.	<u>9.62 (84.9 %)</u>	<u>11.53</u>	<u>0.9 1.24</u>
Depth 2: <u>10</u> (#) ft.	<u>9.20</u>	<u>11.51</u>	<u>1.34</u>
Depth 3: <u>20</u> (#) ft.	<u>9.28</u>	<u>11.51</u>	<u>0.98</u>
Other:			

Evidence of floating or suspended materials: None

Evidence of oil/hydrocarbon sheen:
(Thickness; contiguous?, size, rate of dissipation) None

Discoloration and Turbidity: None

Velocity at stated depth: _____

Color: _____

Odor: _____

Other Observations: _____

Comments:

pH: 1 7.90 2 8.06 3 8.08

Steve Haquivil Andrew Somes

Recorded by: Craig Wells Other Monitoring Personnel:



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Water Quality Monitoring Form

Station ID: <u>TF-WC0-2</u>	Date: <u>11/10/05</u>	Time: <u>14:15</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>Sunny, 50° Calm</u>			
Status/Description of Operation at Time of Sampling: <u>Scouring - R10</u>			
Depth to Bottom: <u>(0) ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (0) ft.</u>	<u>9.21</u>	<u>11.54</u>	<u>1.36</u>
Depth 2: <u>13.5 (0) ft.</u>	<u>9.23</u>	<u>11.50</u>	<u>1.34</u>
Depth 3: <u>27 (0) ft.</u>	<u>9.16</u>	<u>11.48</u>	<u>0.91</u>
Other:			
Evidence of floating or suspended materials:		<u>None</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>None</u>	
Discoloration and Turbidity:		<u>None</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.92</u>	2 <u>8.07</u>	3 <u>8.09</u>	
Recorded by: <u>Craig Wells</u>		Other Monitoring Personnel:	



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Water Quality Monitoring Form

Station ID: TF-WCD-3 Date: 11/10/05 Time: 1420

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing: _____ Long/Easting: _____

Weather/River Stage/Flow Observations: Sunny, 58°, calm

Status/Description of Operation at Time of Sampling: Scraping B-10

Depth to Bottom: 10 ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1</u> (ft.)	<u>9.26</u>	<u>11.58</u>	<u>1.87</u>
Depth 2: <u>13</u> (ft.)	<u>9.37</u>	<u>11.50</u>	<u>1.33</u>
Depth 3: <u>26</u> (ft.)	<u>9.16</u>	<u>11.47</u>	<u>1.30</u>
Other:			

Evidence of floating or suspended materials: None

Evidence of oil/hydrocarbon sheen:
(Thickness, contiguous?, size, rate of dissipation) None

Discoloration and Turbidity: None

Velocity at stated depth:

Color:	
Odor:	
Other Observations:	

Comments:

pH: 1 7.93 2 8.07 3 8.06

Stan Haqueil Andrew Somes

Recorded by: Craig Wetts Other Monitoring Personnel:



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-1</u>	Date: <u>11/11/03</u>	Time: <u>900</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>Sunny winds 18-20</u> <u>swell 2-3'</u>			
Status/Description of Operation at Time of Sampling: <u>cleans R-10; clam loader</u> <u>+ flow at R-10/ Niso clam bucket on crane</u>			
Depth to Bottom: <u>(*)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (*)ft.</u>	<u>9.53</u>	<u>11.55</u>	<u>1.48</u>
Depth 2: <u>11 (*)ft.</u>	<u>9.31</u>	<u>11.54</u>	<u>1.39</u>
Depth 3: <u>26.5 (*)ft.</u>	<u>9.27</u>	<u>11.51</u>	<u>1.21</u>
Other:			
Evidence of floating or suspended materials:	<u>none</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>none</u>		
Discoloration and Turbidity:	<u>none</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.94</u> 2 <u>7.98</u> 3 <u>8.02</u>			
Recorded by: <u>Steph Hansen</u>	Other Monitoring Personnel:		



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Water Quality Monitoring Form

Station ID: <u>TF-WCD-2</u>	Date: <u>11/11/03</u>	Time: <u>9:12</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>Sunny 15-25</u> <u>swell 2-3'</u>			
Status/Description of Operation at Time of Sampling: <u>clean R-10 last parts</u>			
Depth to Bottom: <u>(#)ft.</u>			
	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (#)ft.</u>	<u>9.43</u>	<u>11.51</u>	<u>1.59</u>
Depth 2: <u>13 (#)ft.</u>	<u>9.85</u>	<u>11.50</u>	<u>1.33</u>
Depth 3: <u>26 (#)ft.</u>	<u>9.25</u>	<u>11.50</u>	<u>1.09</u>
Other:			
Evidence of floating or suspended materials:	<u>None</u>		
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)	<u>None</u>		
Discoloration and Turbidity:	<u>None</u>		
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.96</u> 2 <u>8.01</u> 3 <u>8.06</u>			
<u>Shangwell</u>		<u>Mark Cleary (525)</u>	
Recorded by: <u>Crang Wells</u>	Other Monitoring Personnel:		



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Water Quality Monitoring Form

Station ID: TF-WC D-3 Date: 11/11/05 Time: 9:25

Project Name: Gasco Project Number: 000029-02

Coordinates Datum:

Lat/Northing:		Long/Easting:	
---------------	--	---------------	--

Weather/River Stage/Flow Observations: Sunny 15-23
Surf 2-3'

Status/Description of Operation at Time of Sampling:

Depth to Bottom: (~~10~~) ft.

	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (10) ft.</u>	<u>9.12</u>	<u>11.57</u>	<u>1.44</u>
Depth 2: <u>23.5 (10) ft.</u>	<u>9.23</u>	<u>11.55</u>	<u>1.40</u>
Depth 3: <u>27 (10) ft.</u>	<u>9.37</u>	<u>11.53</u>	<u>1.51</u>
Other:			

Evidence of floating or suspended materials:

None

Evidence of oil/hydrocarbon sheen:

(Thickness, contiguous?, size, rate of dissipation)

None

Discoloration and Turbidity:

None

Velocity at stated depth:

Color:

Odor:

Other Observations:

Comments:

pH: 1 7.95 2 7.98 3 8.04

S. Harganil

Mark Clark (SES)

Recorded by: Craig Wells

Other Monitoring Personnel:



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Water Quality Monitoring Form

Station ID: <u>TF-WC-U</u>	Date: <u>11/11/05</u>	Time: <u>9:39</u>	
Project Name: <u>Gasco</u>	Project Number: <u>000029-02</u>		
Coordinates Datum:			
Lat/Northing:		Long/Easting:	
Weather/River Stage/Flow Observations: <u>sun 1 23° sunny 15-25</u>			
Status/Description of Operation at Time of Sampling: <u>Buoys and equipment / Dismantling site first stages of cleanup</u>			
Depth to Bottom: <u>(*)ft.</u>	Dissolved Oxygen (mg/L)	Temperature (C)	Turbidity (NTU)
Depth 1: <u>1 (*)ft.</u>	<u>9.25</u>	<u>11.57</u>	<u>1.43</u>
Depth 2: <u>7 (*)ft.</u>	<u>9.28</u>	<u>11.53</u>	<u>1.27</u>
Depth 3: <u>14 (*)ft.</u>	<u>9.33</u>	<u>11.51</u>	<u>1.36</u>
Other:			
Evidence of floating or suspended materials:		<u>None</u>	
Evidence of oil/hydrocarbon sheen: (Thickness, contiguous?, size, rate of dissipation)		<u>None</u>	
Discoloration and Turbidity:		<u>None</u>	
Velocity at stated depth:			
Color:			
Odor:			
Other Observations:			
Comments:			
pH: 1 <u>7.92</u> 2 <u>7.99</u> 3 <u>8.02</u>			
<u>5 Harbor M Slurry (sec)</u>			
Recorded by: <u>Greg Wells</u>	Other Monitoring Personnel:		